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JOHN H. ALLIE  
WOODARD, EMHARDT, MORIARTY, MCNETT & HENRY LLP  
BANK ONE CENTER/TOWER  
111 MONUMENT CIRCLE, SUITE 3700  
INDIANAPOLIS, IN 46204-5137

EXAMINER

TRIEU, THAI BA

ART UNIT

PAPER NUMBER

3748

DATE MAILED: 05/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/977,804

Applicant(s)

PARKER ET AL.

Examiner

Thai-Ba Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/18/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This Office Action is in response to the Request for Continued Examination filed on December 18, 2003.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Woollenweber (Patent Number 3,993,370).***

Woollenweber discloses a power turbine comprising:

a drive shaft (22) supporting at one end a turbine (10) arranged in use to be driven by exhaust gases from an internal combustion engine and supporting at the other end a drive connection which in use is coupled to a load demand of the internal combustion engine, wherein the shaft (22) is supported in a housing by a first bearing (28 of Figure 1, and 56 of Figure 2) adjacent to the turbine and a second bearing (28 of Figure 1, and 58 of Figure 2) adjacent the drive coupling, the first and second bearings (28 of Figure 1; and 56 and 58 of Figure 2) each defining an inner bearing surface relative to which the shaft rotates and an outer bearing surface which rotates relative to the housing, and the first and second bearings (28 of Figure 1; and 56 and 58 of Figure 2) are mechanically

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coupled together such that said first and second bearings are constrained to rotate relative to the housing at the same speed (See Figures 1-2);

wherein the first and second bearings (56,58) are formed from a single tubular body (28) through which the shaft (22) extends (See Figure 1);

wherein the first and second bearings (56, 58) are separate components interconnected by a tubular body through which the shaft (22) extends (See Figure 2);

wherein the tubular body defines radial apertures (68) to provide oil drainage passage ways (See Figures 2 and 4; Column 4, lines 20-36);

said housing (24 of Figure 1, and 24' of Figure 2) having passageways (via 32 of Figure 1, and 32' of Figure 2) formed therein for connecting a supply of pressurized lubricant to said first and second bearings (28 of Figure 1, and 56 and 58 of Figure 2);

the first and second bearings (28 of Figure 1, and 56 and 58 of Figure 2) defining axially-facing end surfaces which bear against retaining shoulders, the radial thickness of the end surfaces being less than or equal to the radial spacing between the inner and outer bearing surfaces (See Figures 1-2);

wherein said drive shaft (22) has a shoulder against which one of said axially-facing end surfaces is positioned, said apparatus further comprising means for forming a thrust bearing (38 of Figure 1, and 50 of

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Figure 2) adjacent the other of said axially-facing end surfaces, whereby the axial excursions of said shaft are restrained (See Figures 1-2).

***Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Stoenner (Patent Number DE 3936069 A1).***

Stoenner discloses a power turbine comprising:

a drive shaft (14) supporting at one end a turbine (12) arranged in use to be driven by exhaust gases from an internal combustion engine and supporting at the other end a drive connection which in use is coupled to a load demand of the internal combustion engine, wherein the shaft (14) is supported in a housing by a first bearing (22) adjacent to the turbine and a second bearing (202) adjacent the drive coupling, the first and second bearings (22,20) each defining an inner bearing surface relative to which the shaft rotates and an outer bearing surface which rotates relative to the housing, and the first and second bearings (22,20) are mechanically coupled together such that said first and second bearings are constrained to rotate relative to the housing at the same speed (See Figure 1);

wherein the first and second bearings (22,20) are formed from a single tubular body through which the shaft (14) extends (See Figure 3);

wherein the first and second bearings (22,20) are separate components interconnected by a tubular body through which the shaft (14) extends (See Figure 2);

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wherein the tubular body defines radial apertures (not numbered) to provide oil drainage passage ways (See Figure 1);

said housing (6) having passageways (via 18) formed therein for connecting a supply of pressurized lubricant to said first and second bearings (22, 20) (See Figure 1);

the first and second bearings (22, 20) defining axially-facing end surfaces which bear against retaining shoulders, the radial thickness of the end surfaces being less than or equal to the radial spacing between the inner and outer bearing surfaces (See Figures 1 and 3);

wherein said drive shaft (14) has a shoulder against which one of said axially-facing end surfaces is positioned, said apparatus further comprising means for forming a thrust bearing (16) adjacent the other of said axially-facing end surfaces, whereby the axial excursions of said shaft are restrained (See Figure 1);

wherein said housing (6) has passageways (via 18) formed therein for connecting a supply of pressurized lubricant to said thrust bearing means (16) (See Figure 1);

herein said housing (6) has passageways (via 18) formed therein for connecting a supply of pressurized lubricant to said first and second bearings (22, 20) (See Figure 1);

wherein said housing has a common passageway (Not Numbered) for connecting a supply of pressurized lubricant to said thrust bearing means (16) and to said first and second bearings (22,20) (See Figure 1).

### ***Conclusion***

The IDS (PTO-1449) filed on December 18, 2003 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bosco (Patent Number 4,204,718) discloses a bearing assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
April 27, 2004



Thai-Ba Trieu  
Patent Examiner  
Art Unit 3748